

8. The method of claim 7, wherein said bone marrow or peripheral blood stem cells are collected from said patient prior to said aggressive therapeutic regimen.

RECEIVED

9. The method of claim 8, wherein said bone marrow or peripheral blood stem cells are treated with an amount of antibody specific for a malignant B cell surface antigen in vitro effective to purge contaminating tumor B cells.

TECH CENTER 1600/2900

10. The method of claim 1, wherein the patient is treated in step (1) with RITUXAN® and/or radioimmunotherapy.

11. The method of claim 1, wherein the antibody used in step (3) is an anti-CD19 or an anti-CD20 antibody or a fragment thereof.

12. The method of claim 11, wherein said antibody is a chimeric, primate, primatized, humanized or human antibody.

13. The method of claim 12, wherein said antibody is the chimeric anti-CD20 antibody RITUXAN®.

14. The method of claim 13, wherein RITUXAN® is administered at a dosage ranging from about 0.1 to 20 mg/kg about one week after transplant.